

REMARKS/ARGUMENTS

Claims 1-18 remain pending. Claims 8 and 17 are cancelled and the limitations thereof have been incorporated into currently amended claims 1 and 10 respectively. Claims 3, 12 and the specification are amended to overcome the potential ambiguity pointed out by the Examiner. Applicants respectfully request reconsideration in light of the following remarks.

Claims Objections

The claim objections 3-5 of current OA are believed to be resolved by currently amended claims 1, 3, 10 and 12.

Claim Rejections -35 USC 112

Claim Rejections 6 and 7 of current OA are believed to be resolved by currently amended claims 1 and 10.

Rejection of Claims 1 and 10 under 35 U.S.C. 102(e)

Claims 1 and 10 are rejected under 35 USC 102(e) as being anticipated by Wakabayashi et al. (US 2004/0047419). Applicants respectfully traverse the rejection for the following reasons.

Wakabayashi et al.

Wakabayashi et al. is directed to provide an apparatus for detecting motion in image frame with **unclear divided blocks** and **an unclear threshold**. The detailed procedures for detecting motion are (a) dividing an incoming image into a plurality of blocks; (b) comparing said plurality of blocks to corresponding blocks of a referred image and saving compared results into a declared data structure; (c) marking a compared result that exceeds a first predetermined threshold, whereby a changed block corresponding to said compared result can be indicated; (d) grouping said compared result into an adjacent region thereof, whereby changed blocks can be regionally grouped together; and (e) calculating a deviation value of said region and comparing said deviation value to a second predetermined threshold.

The Claimed Invention

The claimed invention is directed to provide a method and a medium for detecting motion and filtering noise with **clear divided blocks** and **two clear thresholds**. The detailed procedures for detecting motion are (a) dividing an incoming image into a plurality of blocks, wherein the size of each block is preferably 1%~4% of the incoming image; (b) comparing said plurality of blocks to corresponding blocks of a referred image and saving compared results into a declared data structure; (c) marking a compared result that exceeds the first predetermined threshold which is preferably 1, and whereby a changed block corresponding to said compared result can be indicated; (d) grouping said compared result into an adjacent region thereof, whereby changed blocks can be regionally grouped together; and (e) calculating a deviation value of said region and comparing said deviation value to the second predetermined threshold which is preferably 0.35 and whereby the motion in images can be detected and the noise can be filtered out (**detected**) by finding out if noise interference exists.

Argument

The present invention is not only to divide an incoming image into a plurality of blocks, but also to limit the size of each block ranging from 1% to 4% of the whole image to reduce the complicated calculations and optimize the exactitude of judgment whether the incoming image is a motion image or not.

Rejection of Claims 2 and 11 under 35 U.S.C. 103(a)

Claims 2 and 11 are rejected under 35 USC 103(a) as being unpatentable over Wakabayashi et al. (US 2004/0047419) in view of Ozaki (US 6,393,153).

The Examiner states that Wakabayashi et al. teaches all the limitations of claim 1 as applied above from which claim 2 respectively depend. Ozaki teaches that size of block of image is 8x8 or 16x16.

Argument

The exact size of block of image is an important know-how. Because different select of each block size of image will affect the calculation complexity and the motion judgment exactitude. We should select each block size properly to reduce calculations effectively and improve the motion judgment apparently. It is unwise to always select a block in a size of 8x8 or 16x16. Therefore setting each block size from 1% to 4 % of an incoming image is necessary.

Rejection of Claims 3-6 and 12-15 under 35 U.S.C. 103(a)

Claims 3-6 and 12-15 are rejected under 35 USC 103(a) as being unpatentable over Wakabayashi et al. (US 2004/0047419) in view of Shiiyama (US 7,075,683).

The Examiner states that Wakabayashi et al. teaches all the limitations of claim 1 as applied above from which claims 3 and 6 respectively depend. Shiiyama teaches detection using average of sum

of square of the difference and teaches fixed threshold.

Argument

To use a fixed threshold is not difficult, but to select an exact value for a threshold is not easy. The present invention recommends that the first threshold should be set to 1. Though Shiiyama's invention mentions the using of average of sum of square of the difference, it doesn't give a clear algorithm.

Rejection of Claims 7 and 16 under 35 U.S.C. 103(a)

Claims 7 and 16 are rejected under 35 USC 103(a) as being unpatentable over Wakabayashi et al. (US 2004/0047419) in view of Liu et al. (US 2004/0233197).

The Examiner states that Wakabayashi et al. teaches all the limitations of claim 1 as applied above from which claims 7 and 16 respectively depend. Liu et al. teaches that group is employed by a double linked list.

Argument

The withdrawal of the rejection is respectfully requested on the following.

A double linked list used in the present invention is emphasizing on its application, not on its prior technology.

Rejection of Claims 9 and 18 under 35 U.S.C. 103(a)

Claims 9 and 18 are rejected under 35 USC 103(a) as being unpatentable over Wakabayashi et al. (US 2004/0047419)

With respect claim 9, the Examiner states that Wakabayashi et al. discloses all the limitations of claim 1 as applied above from which claim 4 respectively depend.

Argument

The second predetermined threshold is utilized to compare with

the deviation values to judge if the incoming image is a motion image or it is interfered by noise. Therefore, providing an exact value for the second threshold is necessary.

With respect to dependent claims not specifically mentioned, it is submitted that these claims are patentable not only by virtue of their dependency on their respective base claims, but also for the totality of features recited therein.

Nevertheless, to accelerate the application to advance to issue, claims 1 and 10 have been amended to incorporate the limitation of the allowed claims 8 and 17 respectively. In view of the amendment and the point in the Allowable Subject Matter section of current OA, all pending claims 1-7, 9-16 and 18 should be in condition for allowance.

CONCLUSION

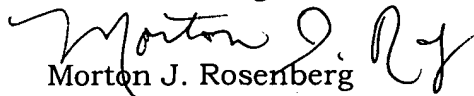
In light of the above amendments and remarks, Applicants respectfully submit that Claims 1-7, 9-16 and 18 as currently presented are in condition for allowance. Accordingly, reconsideration is respectfully requested.

If there are any fees necessary in this filing, the Director of patents and Trademarks is hereby authorized to charge deposit account # 18-2011 for such additional charges.

This Amendment was prepared by Applicant, and is being submitted without substantive change by the undersigned Attorney.

Respectfully submitted,

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